

Work Order ID 140069

Thursday, December 17, 2015 3:41:56 PM

140069

Page 1

Item ID: D6201 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: "T" Extrusion
 Start Date: 12/17/2015 Start Qty: 20.00 ***20*** Cust Item ID:
 Required Date: 12/17/2015 Req'd Qty: 20.00 ***20*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: DEC 21 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6201	Rev A								

100

100

Purchasing

Purchasing

PURCHASING

Memo

Issue P/O: 31037

a)Description: T-beam extrusion

b) 4.00" x 4.00" x 0.375"

c) Minimum Ultimate Tensile Strength = 38ksi

d) Minimum Yield Tensile strength = 35ksi

e) Material: 6061-T6/T6511 (QQ-A-200/8)

f)Material certification required

***EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE
 SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH
 AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS,
 OR DENTS.***

MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE

DAS
13
9-89

JAN 18 2016

20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

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Page 2

Item ID: D6201 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: "T" Extrusion
 Start Date: 12/17/2015 Start Qty: 20.00 ***20*** Cust Item ID:
 Required Date: 12/17/2015 Req'd Qty: 20.00 ***20*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	Memo	0.01							
Packaging	Ensure material certification is attached								
120	QC6- Inspect dimensions to drawing	0.00							
120									
QC	Memo	0.00							
Quality Control	Ensure Material certification comply to Dwg D6104								
130	Identify as per dwg & Stock Location: MAT028	0.00							
130									
Packaging	Memo	0.00							
Packaging	LOCATION: MAT028								

20 SQ 16-01-22

20 **DAS**
14
9-89
16/01/25

20 **DAS**
14
9-89
16/01/25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Page 3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: "T" Extrusion

Stop *NS2*

Start Date: 12/17/2015 **Start Qty:** 20.00

20

Cust Item ID:

Required Date: 12/17/2015 **Req'd Qty:** 20.00

20

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID

Tool #	Plan Code
--------	-----------

**Accept
Qty**

Reject
Qty

Reject Number

**Insp.
Stamp**

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.03

Quality Control

ML5 JAN 26 2016

MLJ JAN 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

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Work Order ID: 140069

140069

Parent Item: D6201

D6201

Parent Item Name: "T" Extrusion

Start Date: 12/17/2015

Required Date: 12/17/2015

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP A: 01.05.15New Issue EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6201P		Purchased		No		110	f	0.0000	1	20			
D6201P									**				
T Extrusion 4X4X3/8													

20 8/16/01-22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

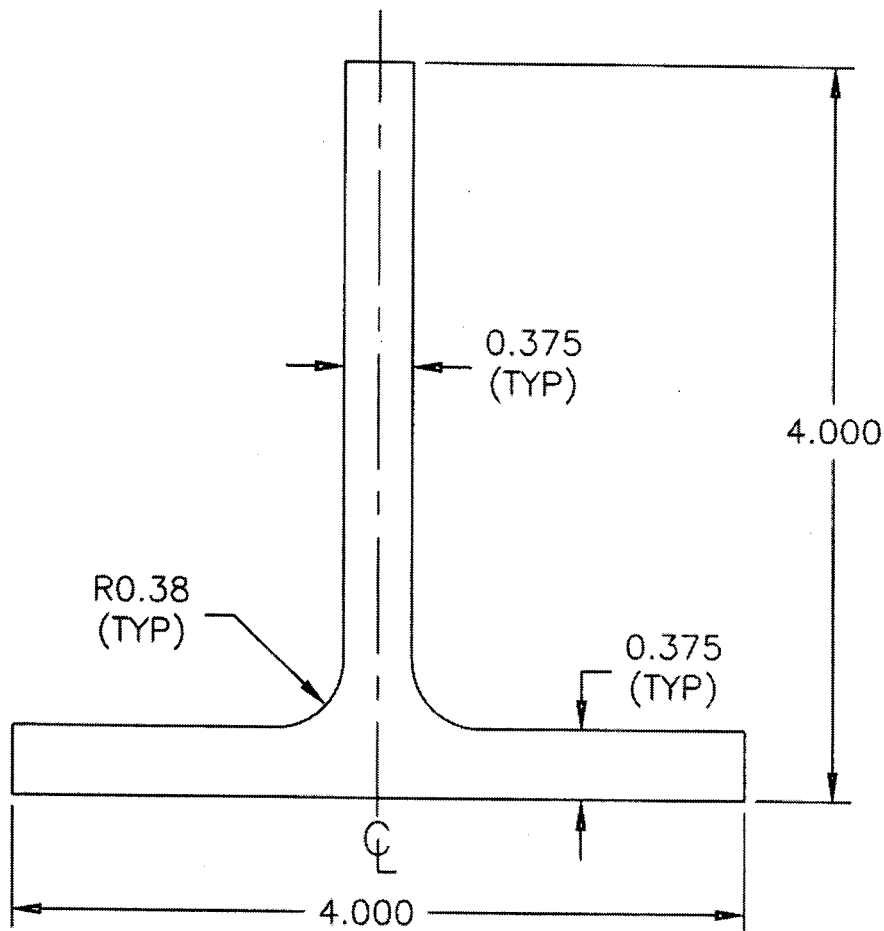
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																



DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D6201	REV. A SHEET 1 OF 1
DATE 01.04.10		TITLE T-BEAM EXTRUSION	SCALE 1:1
A	01.04.10	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
01.04.23



D6201-XXX T-BEAM EXTRUSION
WHERE XXX IS LENGTH IN INCHES

EG.
D6201-027 IS 27 INCHES LONG

PURCHASE MATERIAL: ALUMINUM "T"-EXTRUSION ROUND FILLET
4.000" x 4.000" x 0.375"
6061-T6/T6511 (QQ-A-200/8)
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
MINIMUM YIELD TENSILE STRENGTH = 35 ksi

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 1250065 M-5
15-12-21

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO31037

Purchase Order Date 1/18/2016

PO Print Date 1/18/2016

Page Number 1 of 3

Order From :

VC-CAM002

Ship To : DART AEROSPACE LTD

CAMPI STEEL
935 BOUL. DU HAVRE
VALLEYFIELD, QC J6S 5L1
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAIL

JAN 18 2016

Contact Name

Vendor Phone 800 667 4248

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Ship To Contact

Terms

Net 30

Ship To Phone

Currency

CAD

Ship Via:

Yours ppd

FOB

FCA - (Free Carrier)

Ship Acct:

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
	Line Comments		Promise Date				
	Delivery Comments						
1	D6201P	T Extrusion 4X4X3/8	1/22/2016		20.00	\$20.50	\$410.00
			Yes				
			1/22/2016				
	AS PER DWG D6201 REV. A B140069						
						Line Total:	\$410.00
2	D6202P	I Beam Extrusion	1/28/2016		25.00	\$76.60	\$1,915.00
			Yes		f		
			1/28/2016				
	AS PER DWG D6202 REV. A B140205 SIZE: 4.000" X 2.796" X 0.326" THICK					Line Total:	\$1,915.00

PO Instructions: QUOTE NO: 376830
QUOTE NO: 376755

Note:

1/18/2016



Tél.: 1 800 667-4248
Fax : 1 866 456-4242

INSTRUMENTS D'ACIER ET DE MATÉRIAUX SPÉCIALISÉS
INSTRUMENTS SPECIALIZED STEEL & TOOL

www.aciercampi.com

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY,
ONTARIO
K6A 1K7

COMMANDE	
ORDER	N° 259196
DATE 18/01/16	
BON DE LIVRAISON	
PACKING SLIP	N°
DATE DE LIVRAISON	
DELIVERY DATE	21/01/16

VOTRE N° DE COMMANDE / YOUR P.O. N° P031037	VEND./SALES M. V	CODE CLIENT / CUST. CODE DAER	EXPÉDIER PAR / SHIP VIA 12345	TERMES / TERMS NET 30 JOURS	TERR. 2R	REMARQUES / REMARKS	PAGE N° 001
--	---------------------	----------------------------------	----------------------------------	--------------------------------	-------------	---------------------	----------------

CODE DE PRODUIT PRODUCT CODE	COMMANDE ORDERED	EXPÉDIÉ SHIPPED	DESCRIPTION	POIDS WEIGHT	PRIX PRICE	PAR PER *	MONTANT AMOUNT
	1		"T" EN ALU D6201 4x4x.375" 1 X 20' heat: 852198	1.00			\$16-01-22
	2		PLATE ALU 6061-T6 1 1/2" 2 MCX OF 7 1/2" X 39 1/2" heat: 15cn-b-663	2.00			
FAL114212	12		ALUM. FLAT 1-1/4 X 2-1/2 1 X 12' R/L heat: 04221504	45.00			
				POIDS TOTAL TOTAL WEIGHT	48		

* Units of measure : CLB Cent (100) thousand pounds CPI Cent (100) plates hundred feet UN Unit PI Plate Foot PC Flat card Square foot

CONDITIONS :

LES MATERIAUX LIVRES ET FACTURES TELS QUE DECRITS DEMONSTRANT LA PROPRIÉTÉ DE JACQUES GAZDAR SNC. JUSQU'À PARFAIT PAIEMENT COMPLET ENCAISSÉ. - LES PÉRIODES DE PERTE DU CREDIT SONT À LA CHARGE DE L'ACHETEUR. - LA GARANTIE DE QUALITÉ DU MATÉRIEL EST LA MÊME QUE CELLE DU FABRICANT. - L'ACHETEUR S'ENGAGE À RESPECTER LES CONDITIONS SUIVANTES : INET 30 JOURS DE LA DATE DE FACTURATION, ET TOUT CREDIT INVARIÉ ENFIN LES 30 JOURS ENTRAÎNANT DES FRAIS DE 2% PAR MOIS (24% PAR ANNEE) DONT, ACCEPTÉ DE PAYER, - TOUT DÉFAUT D'EXÉCUTION LUNE DU CREDIT EN VERTU DES OBLIGATIONS EN VERTU DU PRÉSENT CONTRAT ENTRAÎNANT LA DÉCHARGE DU DÉBIT ET RETOUR À L'ACHETEUR À SON CHARGE, - TOUT SOLDE DU PRINCIPIAL, - LE CREDIT EN VERTU - TOUTE RÉGULARISATION DE LA PARTIE DANS LES CINQ JOURS SUIVANT PRÉSENTATION DE CE DOCUMENT - TOUTE MARCHANDISE ENDEBARRASSÉE, ALTÉRÉE OU COMPLÈTE NE PEUT ÊTRE REPRIS. - AUCUN RETOUR DE MARCHANDISE NE SERA ACCEPTÉ SANS NOTIFICATION AUTANT. - TOUTE MARCHANDISE RETOURNÉE EST SUIVANTE À DES FRAIS DE MANUTENTION DE 25%.

CONDITIONS :

ALL SOLD AND DELIVERED MATERIALS REMAIN THE PROPERTY OF "AGZER CASHI LTD." UNTIL PAYMENT IS MADE FULL, COMPLETE AND CASHED. - ALL
LOST MATERIALS ARE AT THE BUYER'S EXPENSE. - ALL MATERIALS BEAR THE SAME WARRANTY AS GIVEN BY THE MANUFACTURER. - THE BUYER HEREBY
ACCEPTS TO RESPECT THE FOLLOWING CONDITIONS: NET 30 DAYS FROM BILLING DATE AND THE BUYER ACCEPTS TO PAY ADMINISTRATION CHARGES OF
2% PER MONTH OR 24% PER ANNUUM ON ALL PAST DUE ACCOUNTS OVER 30 DAYS. - ANY DEFAULT IN RESPECT WITH THIS CONTRACT WILL LEAD TO
PAYMENT BY ACCELERATION AND PERMITS TO THE SELLER, AT HIS CHOICE TO CLAIM FOR THE BALANCE DUE OR THE REPOSSESSION OF THE GOODS SOLD. -
ANY CLAIM MUST BE MADE WITHIN FIVE DAYS WITH THIS DOCUMENT ENCLOSED. - ANY AGREEMENTS THAT HAS BEEN DAMAGED, CUT OR MODIFIED
CANNOT BE RETURNED. - ALL GOODS RETURNED MUST BE WITH OUR AUTHORIZATION AND ARE SUBJECT TO A 25% RESTOCKING CHARGE.

SOUS-TOTAL	
SUB TOTAL	

T.P.S.
G.S.T.

T.V.Q. / T.V.H.
G.S.T. / H.S.T.

TOTAL

PRÉPARÉ PAR / PREPARED BY	VÉRIFIÉ PAR / VERIFIED BY	LIVRÉ PAR / DELIVERED BY	HEURE / TIME

MARCHANDISE RECUE EN BONNE CONDITION		MARCHANDISE REÇUE EN BONNE CONDITION	
	A/Y	M/M	J/D
X			

DATE _____

Nº ENR. TPS / GST REG. Nº 822 435 970 RT 0001 • Nº ENR. TVQ / QST REG. Nº 122 127 8280 TQ 0001

SIGNATURE DU CLIENT / CUSTOMER'S SIGNATURE

SCRIPTO-197



MILL TEST/QUALITY CONTROL CERTIFICATE
NORTHEAST LIGHT ALLOY CO. LTD.

ADDRESS: XINJIANG STREET,
PINGFANG DISTRICT
HARBIN CHINA

FAX: 86-451-86808342
TEL: 86-451-86664283

REF: M15081
No. of Invoice: 15NE-081



PRODUCT: PRIME ALUMINUM PLATE 6061 T651
TEST DATE: 2015-08-10

1. MATERIAL SPECIFICATION:

Alloy/ Temper	LOT NO.	SIZE(INCH/MM)	N.W. (MT/LBS)	G.W. (MT/LBS)	PCS	Pile	Order No.	HEAT NO.
6061T651	T0714	15.88x1536.7x3670.3	2.522	2.622	10	1	R148978	15CN-E-644
		(0.625"X60.5"X144.5")	5560	5781				
6061T651	T1311/T1312/T0722	25.4x1536.7x3670.3	1.99	2.09	5	1	R148978	15CN-E-649
		(1.0"X60.5"X144.5")	4387	4608				
6061T651	T1312	25.4x1536.7x3670.3	2.392	2.492	6	1	R148978	15CN-E-647
		(1.0"X60.5"X144.5")	5273	5494				
6061T651	T0722	25.4x1536.7x3670.3	2.398	2.498	6	1	R148978	15CN-E-643
		(1.0"X60.5"X144.5")	5287	5507				
6061T651	T1311	25.4x1536.7x3670.3	2.404	2.504	6	1	R148978	15CN-E-646
		(1.0"X60.5"X144.5")	5300	5520				
6061T651	T1313	25.4x1536.7x3670.3	2.394	2.494	6	1	R148978	15CN-E-633
		(1.0"X60.5"X144.5")	5278	5498				
6061T651	T1308/T1313	25.4x1536.7x3670.3	2.398	2.498	6	1	R148978	15CN-E-632
		(1.0"X60.5"X144.5")	5287	5507				
6061T651	T1308	25.4x1536.7x3670.3	2.398	2.498	6	1	R148978	15CN-E-629
		(1.0"X60.5"X144.5")	5287	5507				
6061T651	T1334	31.75x1536.7x3670.3	2.48	2.58	5	1	R148978	15CN-E-656
		(1.25"X60.5"X144.5")	5467	5888				
6061T651	T1310	15.88x1536.7x3670.3	2.5	2.6	10	1	R149158	15CN-E-653
		(0.625"X60.5"X144.5")	5512	5732				
6061T651	LT0258/T1310	15.88x1536.7x3670.3	2.488	2.588	10	1	R149158	15CN-E-659
		(0.625"X60.5"X144.5")	5441	5661				
6061T651	T0718	19.05x1536.7x3670.3	2.418	2.518	8	1	R149158	15CN-E-655
		(0.75"X60.5"X144.5")	5331	5551				
6061T651	LT1297/T0719	19.05x1536.7x3670.3	2.708	2.808	9	1	R149158	15CN-E-631
		(0.75"X60.5"X144.5")	5970	6191				
6061T651	T0719	19.05x1536.7x3670.3	2.376	2.476	8	1	R149158	15CN-E-630
		(0.75"X60.5"X144.5")	5238	5459				
6061T651	T0998	19.05x1536.7x3670.3	2.384	2.484	8	1	R149158	15CN-E-654
		(0.75"X60.5"X144.5")	5266	5476				

PA6 1121

6061T651	T1346	76.2x1231.9x3670.3	1.884	1.964	2	1	R149158	15CN-E-695
		(3.0"x48.5"x144.5")	4154	4330				
6061T651	T1346	76.2x1231.9x3670.3	1.884	1.964	2	1	R149158	15CN-E-696
		(3.0"x48.5"x144.5")	4154	4330				
6061T651	T1336	38.1x1231.9x3670.3	1.42	1.5	3	1	R149277	15CN-E-663
		(1.50"x48.5"x144.5")	3131	3307				
6061T651	T1336	38.1x1231.9x3670.3	1.892	1.972	4	1	R149277	15CN-E-664
		(1.50"x48.5"x144.5")	4171	4348				
6061T651	T1398	38.1x1231.9x3670.3	2.358	2.438	5	1	R149277	15CN-E-693
		(1.50"x48.5"x144.5")	5198	5375				
6061T651	T1338/ T1398	38.1x1231.9x3670.3	2.36	2.44	5	1	R149277	15CN-E-694
		(1.50"x48.5"x144.5")	5203	5379				

2. CHEMICAL COMPOSITION:

LOT NO	Cu	Mg	Mn	Fe	Si	Zn	Ni	Cr	Ti	Others Total	Al
T0714	0.18	1.01	<0.15	0.42	0.60	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1311	0.18	0.95	<0.15	0.43	0.61	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1312	0.18	0.95	<0.15	0.43	0.61	<0.20	<0.05	0.15	<0.10	0.15	Bal
T0722	0.18	0.99	<0.15	0.40	0.60	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1313	0.18	0.99	<0.15	0.40	0.60	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1308	0.18	1.00	<0.15	0.42	0.60	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1334	0.18	1.05	<0.15	0.42	0.68	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1310	0.17	1.03	<0.15	0.43	0.61	<0.20	<0.05	0.15	<0.10	0.15	Bal
LT0258	0.25	1.00	<0.15	0.50	0.64	<0.20	<0.05	0.15	<0.10	0.15	Bal
T0718	0.18	1.01	<0.15	0.42	0.60	<0.20	<0.05	0.15	<0.10	0.15	Bal
LT1297	0.22	1.01	<0.15	0.42	0.65	<0.20	<0.05	0.14	<0.10	0.15	Bal
T0719	0.17	1.03	<0.15	0.43	0.61	<0.20	<0.05	0.14	<0.10	0.15	Bal
T0998	0.17	1.03	<0.15	0.43	0.61	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1346	0.20	0.95	<0.15	0.47	0.61	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1336	0.20	1.00	<0.15	0.48	0.62	<0.20	<0.05	0.14	<0.10	0.15	Bal
T1398	0.20	1.02	<0.15	0.41	0.60	<0.20	<0.05	0.15	<0.10	0.15	Bal
T1338	0.21	0.90	<0.15	0.49	0.61	<0.20	<0.05	0.15	<0.10	0.15	Bal

All figures are weight percent, single figures indicate maxima.

3. MECHANICAL PROPERTIES:

Tensile properties conform to AA specifications and are measured in the transverse direction.

Lot No.	TENSILE STRENGTH(ksi)	YIELD STRENGTH (ksi)	Percentage elongation after fracture(%)
T0714	42.9	38.4	14.5
T1311	42.8	38.4	14.0
T1312	42.1	38.0	13.5
T0722	42.8	38.4	14.4
T1313	43.1	38.0	15.0
T1308	43.2	38.3	14.7
T1334	43.8	40.0	14.0
T1310	42.3	36.7	14.7
LT0258	43.0	37.7	13.6
T0718	42.3	37.7	14.6
LT1297	42.3	37.6	14.9



T0719	42.4	35.4	16.7
T0998	42.2	37.6	14.0
T1346	44.2	39.9	12.7
T1336	42.5	38.3	15.2
T1398	44.0	38.8	13.9
T1338	44.2	39.7	14.0

4. TOLERANCE:

Lot No.	Thickness Tolerance	Width Tolerance	Length Tolerance
T0714	-0/+0.027 in.	-0/+0.157 in.	-0/+0.157 in.
T1311	-0/+0.047 in.	-0/+0.157 in.	-0/+0.157 in.
T1312	-0/+0.047 in.	-0/+0.157 in.	-0/+0.157 in.
T0722	-0/+0.047 in.	-0/+0.157 in.	-0/+0.157 in.
T1313	-0/+0.047 in.	-0/+0.157 in.	-0/+0.157 in.
T1308	-0/+0.047 in.	-0/+0.157 in.	-0/+0.157 in.
T1334	-0/+0.047 in.	-0/+0.157 in.	-0/+0.157 in.
T1310	-0/+0.027 in.	-0/+0.157 in.	-0/+0.157 in.
LT0258	-0/+0.027 in.	-0/+0.157 in.	-0/+0.157 in.
T0718	-0/+0.037 in.	-0/+0.157 in.	-0/+0.157 in.
LT1297	-0/+0.037 in.	-0/+0.157 in.	-0/+0.157 in.
T0719	-0/+0.037 in.	-0/+0.157 in.	-0/+0.157 in.
T0998	-0/+0.037 in.	-0/+0.157 in.	-0/+0.157 in.
T1346	-0/+0.075 in.	-0/+0.157 in.	-0/+0.157 in.
T1336	-0/+0.039 in.	-0/+0.157 in.	-0/+0.157 in.
T1398	-0/+0.039 in.	-0/+0.157 in.	-0/+0.157 in.
T1338	-0/+0.039 in.	-0/+0.157 in.	-0/+0.157 in.

1/2AA tolerances apply

5. SQUARENESS: Maximum difference between diagonals (inches):

Lengths 144.5 inches	0.055xwidth,ft
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6. FLATNESS: Allowable deviation from Flat(Inches):

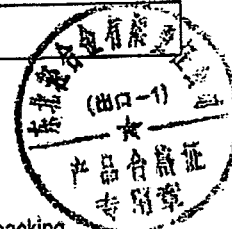
Longitudinal flatness 3/32 inch in any 6 ft or less	Short-span flatness	
	0.825-3.0 in.	0.038 inch in any 2 ft or less
Transverse flatness		
Thickness: form 0.625 to 1.5in	5/32 in.	
Width: 48.5-60.5 in.		
Thickness: 3.0 in.	3/32in	
Width: 48.5 in.		

7. Lateral Bow: Max deviation from a straight edge: 0.1 inch 1/2AA tolerances apply

8. Surface quality:

- ◆ Brushed finish.
- ◆ Edge burr must be small enough not to cause interference when packing.
- ◆ Scratches that cannot be felt with the fingernail are acceptable on the surfaces.
- ◆ Max number of indentations:1 in any surface area measuring 3ftx3ft.

9. Packing: On wooden pallet, securely for export, with suitable dessicant included (6 bags at least).



10. Plate Marking: Each plate will be line marked showing the following:

- ◆ Alloy and temper
- ◆ Nominal thickness(Inches)
- ◆ Lot No.
- ◆ Specification:ASTM-B209 AMS 4027 ASME-SB209 AMS-QQA 250/11
- ◆ Producer: NELA

11. Labeling: Each pack shall be labeled with the following information:

- | | |
|-------------------------|--------------|
| ◆ Aluminium Alloy Plate | ◆ Lot number |
| ◆ Customer: | ◆ N.W.(kg) |
| ◆ Alloy & Temper | ◆ G.W.(kg) |
| ◆ Size(Inches): | ◆ No.of PCS |
| ◆ Order No. | |
| ◆ Pallet No. | |
| ◆ Made in China | |

MATERIAL CONFORMS AMS QQA250/11, AMS 4027, ASTM B209 SB-209 IN ALL RESPECTS

CHIEF INSPECTOR:





Can Do.

Service Center Metals

5850 Quality Way
Prince George, VA 23875

CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

67720

OUR ORDER NUMBER	ITEM
233012	4

BILL TO	MANIFEST NUMBER 260040	DIE NUMBER MRB0475	DATE OF SHIPMENT 5/12/2015
SHIP TO	CUSTOMER PO 767020	ALLOY/TEMPER 6061-T6511	SALESPERSON D. Schroeder (Canada)
Quantity Certified 1,068 lbs 24 pcs	CUSTOMER PART NUMBER 51318913	DESCRIPTION MQRB 1.250 +.012 x 2.500 +.024	

CERTIFICATION ASTM-B221-14 StencilCont
SPECIFICATION AMS-QQA-200/8 - 1997

Items produced and certified as 6061-T6511
also meet the requirements of 6061-T6

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA.

Mechanical Properties		Test Date	Ultimate Tensile Strength (KSI)		Yield Strength (KSI)		Percent Elongation	
Tests	Lot No.		min	max	min	max	min	max
1	201508748	5/7/15	48.60	48.60	44.10	44.10	14.55	14.55

Chemical Composition for Aluminum Alloy 6061

Cast #	Lot No.	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others		Melt Source:
												Each	Total	
04221504	201508748	6061	0.76	0.39	0.35	0.09	0.87	0.09	0.08	0.02	97.35	0.05	0.15	United States of America

Print Date: 5/12/2015

Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - UMS

ACIER CAMP INC. P.O. - 67702 67708 67720 S.O. - 366396

CERTIFICATE OF COMPLIANCE

05/31/2015		5357009	118419	1
PO37685		020743	852198 <i>pieces</i>	05/31/15

002		C-031522-10	240" MILL 6061 T6S11	3/8X4X4" TEE ALUMINUM
		774 LBS		
		752 LBS	11 PCS	1 PKGS

ASTM B221-08	
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Mechanical Tests:

~~DAG~~

14

9-89

16/01/25

<u>Tensile</u>	<u>Yield</u>		<u>Conductivity</u>	<u>HRE</u>
<u>MPA / KSI</u>	<u>MPA / KSI</u>	<u>% Elongation</u>		
334.5 / 48.5	304.2 / 44.1	15.4	N/A	92

Chemical Analysis:

<u>Si</u>	<u>Fe</u>	<u>Cu</u>	<u>Mn</u>	<u>Mg</u>	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	<u>V</u>	<u>Zr</u>
0.60	0.24	0.19	0.06	0.87	0.06	0.06	0.02	0.01	0.00

This Material is Made in Canada

This Material is RoHS Compliant

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Mazzotta
Director of Quality
Signature Aluminum Canada Inc

ISO 9001/T316949 Registered Company

Visit us at www.signaturealum.com

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6201
 DATE: 16/01/25

PO / BATCH NO: 31037/1400169

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 20'
 QUANTITY INSPECTED: 20'
 QUANTITY REJECTED: _____

THICKNESS ORDERED: 4.00X4.00X.375
 THICKNESS RECEIVED: 4.00X4.00X.375
 SHEET SIZE ORDERED: _____
 SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	☒	
CORRECT FINISH	☒	N	
CORROSION	Y	☒	
CORRECT GRAIN DIRECTION	☒	N	
CORRECT MATERIAL	☒	N	
CORRECT THICKNESS	☒	N	
PHOTO REQUIRED	Y	☒	
CORRECT MATERIAL	☒	N	
CORRECT REF # TO LINK CERT	☒	N	
CORRECT MATERIAL IDENTIFICATION	☒	N	
CORRECT M# ON THE MATERIAL	☒	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u> <u>14</u> DATE: <u>16/01/25</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

- 1- VERIFY STOCK TO DART PURCHASE ORDER
- 2- MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
- 3- VERIFY CONDITION OF MATERIAL i.e. DAMAGED, CORRODED, etc.
- 4- VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
- 5- VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
- 6- REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

- 1- VERIFY TO DART SUPPLIED DRAWING
- 2- SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
- 3- USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
- 4- VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING

AFTER MATERIAL PASSES INSPECTION

- 5- HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN **20pcs** FOR FULL INSPECTION
- 6- INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

- 1- VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
- 2- INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
- 3- INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
- 4- IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE2.....) AND W/O# AND PO#
- 5- RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC COORDINATOR BEFORE GOING FURTHER